

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application. An identifier indicating the status of each claim is provided.

Listing of Claims:

1. (Currently Amended) A data recorder-reproducer comprising a recording medium which can be accessed at random and plural input/output processing means for processing input data including video and/or audio data and outputting and recording said input data in said recording medium and for processing and outputting data reproduced from said recording medium, in which said plural input/output processing means access said recording medium within respectively allotted time slots to input and output said data, said data recorder-reproducer comprising:

interface means for receiving bit map data externally supplied from a network or memory card separate from said recording medium on which said input data is recorded;

whereby said data recorder-reproducer includes interpolation means for restoring lost input data by using stored parity data and remaining input data and an integral mixer operable to superimpose said bit map data on data to be recorded by said recorder-reproducer such that the data to be recorded is recorded with the superimposed data, and/or to superimpose said bit map data on data that is reproduced by said recorder-reproducer,

wherein the data recorder-reproducer can perform update of firmware stored in controllers without exchanging ROMs.

2. (Previously Presented) The data recorder-reproducer according to claim 1, wherein said bit map data is input to said interface means through an Ether-network.

3. (Previously Presented) The data recorder-reproducer according to claim 1, wherein said bit map data is recorded in a detachable memory card and said bit map data recorded in said memory card is received by inserting said memory card into said interface means.

4. (Currently Amended) A data recorder-reproducer comprising a recording medium which can be accessed at random and plural input/output processing means for processing input data including video and/or audio data and outputting and recording said input data in said recording medium and for processing and outputting data reproduced from said recording medium, in which said plural input/output processing means access said recording medium within respectively allotted time slots to input and output said data, said data recorder-reproducer comprising:

rewritable storage means for storing a first control program which is used for processing by at least one of said plural input/output processing means;

interface means for receiving an externally supplied second control program which is used for processing by said at least one of said plural input/output processing means; and

rewriting means for rewriting said first control program stored in said storage means into said second control program received by said interface means;

whereby said data recorder-reproducer includes interpolation means for restoring lost input data by using stored parity data and remaining input data and an integral mixer operable to superimpose bit map data on data to be recorded by said recorder-reproducer such that the data to be recorded is recorded with the superimposed data, and/or to superimpose said bit map data on data that is reproduced by said recorder-reproducer,

wherein the data recorder-reproducer can perform update of firmware stored in controllers without exchanging ROMs.

5. (Previously Presented) The data recorder-reproducer according to claim 4, wherein said first control program data is input to said interface means through an Ethernet network.

6. (Previously Presented) The data recorder-reproducer according to claim 4, wherein said second control program data is recorded in a detachable memory card separate from said recording medium on which said input data is recorded and said second control program data recorded in said memory card is received by inserting said memory card into said interface means.

7. (Currently Amended) A data recorder-reproducer comprising a recording medium which can be accessed at random and plural input/output processing means for processing input data including video and/or audio data and outputting and recording said input data in said recording medium and for processing and outputting data reproduced from said recording medium, in which said plural input/output processing means access said recording

medium within respectively allotted time slots to input and output said data, said data recorder-reproducer comprising:

interface means for receiving externally supplied setting data which is used to set at least one of said plural input/output processing means; and

setting changing means for changing settings corresponding to said at least one input/output processing means based on said setting data received by said interface means;

whereby said data recorder-reproducer includes interpolation means for restoring lost input data by using stored parity data and remaining input data and an integral mixer operable to superimpose bit map data on data to be recorded by said recorder-reproducer such that the data to be recorded is recorded with the superimposed data, and/or to superimpose said bit map data on data that is reproduced by said recorder-reproducer,

wherein the data recorder-reproducer can perform update of firmware stored in controllers without exchanging ROMs.

8. (Previously Presented) The data recorder-reproducer according to claim 7, wherein said setting data is received by said interface means through an Ether-network.

9. (Previously Presented) The data recorder-reproducer according to claim 7, wherein said setting data is recorded in a detachable memory card separate from said recording medium on which said input data is recorded and said setting data recorded in said memory card is received by inserting said memory card into said interface means.

10. (Currently Amended) A bit map data processing method of a data recorder reproducer comprising a recording medium which can be accessed at random and plural input/output means, in which said input/output processing means process input data including video and/or audio data and outputs and records said input data in said recording medium within respectively allotted time slots and moreover, processes and outputs data reproduced from said recording medium within allocated time slots, said bit map data processing method comprising the step of:

receiving bit map data externally supplied from a network or memory card separate from said recording medium on which said input data is recorded;

whereby said data recorder-reproducer includes interpolation means for restoring lost input data by using stored parity data and remaining input data and an integral mixer operable to superimpose said bit map data on data to be recorded by said recorder-reproducer such that the data to be recorded is recorded with the superimposed data, and/or to superimpose said bit map data on data that is reproduced by said recorder-reproducer,

whereby the data recorder-reproducer can perform update of firmware stored in controllers without exchanging ROMs.

11. (Previously Presented) The bit map data processing method of the data recorder reproducer according to claim 10, wherein said bit map data is received through an Ether-network.

12. (Previously Presented) The bit map data processing method of the data-recorder reproducer according to claim 10, wherein said bit map data is recorded in a detachable

memory card and said bit map data recorded in said memory card is received in said receiving step.

13. (Currently Amended) A control program data processing method of a data recorder-reproducer comprising a recording medium which can be accessed at random and plural input/output means, in which said input/output processing means process input data including video and/or audio data and outputs and records said input data in said recording medium within respectively allotted time slots and moreover, processes and outputs data reproduced from said recording medium within allocated time slots, said control program data processing method comprising the steps of:

storing a first control program which is used for processing of said plural input/output processing means in a rewritable storage means;

receiving an externally supplied second control program which is used for processing by said plural input/output processing means;

rewriting said first control program data stored in said storing means into said second control program received in said receiving step; and

processing said data which is input/output to/from said input/output processing means based on said second control program;

whereby said data recorder-reproducer includes interpolation means for restoring lost input data by using stored parity data and remaining input data and an integral mixer operable to superimpose bit map data on data to be recorded by said recorder-reproducer such that the data to be recorded is recorded with the superimposed data, and/or to superimpose said bit map data on data that is reproduced by said recorder-reproducer.

whereby the data recorder-reproducer can perform update of firmware stored in controllers without exchanging ROMs.

14. (Previously Presented) The control program data processing method of the data recorder-reproducer according to claim 13, wherein said second control program is received through an Ether-network.

15. (Previously Presented) The control program data processing method of the data recorder-reproducer according to claim 13, wherein said second control program is recorded in a detachable memory card separate from said recording medium on which said input data is recorded and said second control program recorded in said memory card is received in said receiving step.

16. (Currently Amended) A setting data processing method of a data recorder reproducer comprising a recording medium which can be accessed at random and plural input/output means, in which said input/output processing means process input data including video and/or audio data and outputs and records said input data in said recording medium within respectively allotted time slots and moreover, processes and outputs data reproduced from said recording medium within allocated time slots, said setting data processing method comprising the steps of:

receiving externally supplied setting data which is used to set at least one of said plural input/output processing means;

changing settings corresponding to said at least one input/output processing means based on said setting data received in said receiving step; and

processing said data which is input/output to/from said input/output processing means based on said setting data;

whereby said data recorder-reproducer includes interpolation means for restoring lost input data by using stored parity data and remaining input data and an integral mixer operable to superimpose bit map data on data to be recorded by said recorder-reproducer such that the data to be recorded is recorded with the superimposed data, and/or to superimpose said bit map data on data that is reproduced by said recorder-reproducer,

whereby the data recorder-reproducer can perform update of firmware stored in controllers without exchanging ROMs.

17. (Previously Presented) The setting data processing method of the data recorder-reproducer according to claim 16, wherein said setting data is received through an Ether-network.

18. (Previously Presented) The setting data processing method of the data recorder-reproducer according to claim 16, wherein said setting data is recorded in a detachable memory card separate from said recording medium on which said input data is recorded and said setting data recorded in said memory card is received in said receiving step.

19. (Previously Presented) The data recorder-reproducer according to claim 4 wherein said rewritable storage means is a rewritable flash ROM.

20. (Previously Presented) The data recorder-reproducer according to claim 7 wherein said setting data is used to set a first one of said input/output processing means to a second one of said input/output processing means.